Thanks to Mr. Champlain, this male has been placed in the collection of The Academy of Natural Sciences of Philadelphia.

EXPLANATION OF PLATE XI.

Figs. 5-8. Supposed male of *Ophiogomphus howei* Bromley.
Fig. 5. Left lateral aspect of the hind end of the abdomen; the dotted line on segment 9 shows the outline of the yellow spot. × 17.3.
Fig. 6. Caudal aspect of the same, ventral parts only.
Fig. 7. Left lateral aspect of the genitalia of the second abdominal segment, penis extruded.
Fig. 8. Dorsal aspect of the hind end of the abdomen. In figs. 5, 6 and 8 the black-tipped apices of the inferior appendage furnish good landmarks for comparison; *sba*, subanal laminae; *spra*, supraanal lamina.

A Bee Collecting Trip to Chimney Rock, Wyoming.

By T. D. A. COCKERELL, Boulder, Colorado.

With the Description of a New Species of Osmia.

By GRACE A. SANDHOUSE.

On the seventeenth day of May, 1924, my wife and I had the pleasure of visiting Chimney Rock, Wyoming, in the company of a group from the University of Wyoming. The party included Dr. and Mrs. E. B. Payson, botanists; E. C. Harrah, zoologist; C. L. Corkins, entomologist; Dr. J. E. Downey, psychologist; and several others. I had never collected an insect in Wyoming before, and the country visited, although in Albany County and only a short distance from the Colorado line, was unlike any I had seen. It consists of wide, dry valleys and plains, with a few small streams, and at the sides huge masses of red sandstone rock, carved into grotesque shapes, and with the stratification horizontal. The snail *Oreohelix cooperi* (W. G. Binney) was found in some abundance. The most conspicuous flower was *Mertensia humilis* Rydb., a very beautiful thing with deep blue bells, new to me in life. Curiously, it is so closely related to an alpine species that its distinctness as a species is questioned. The flora in general is that of the Transition Zone, and with Dr. Payson's help I made the following list of characteristic species:

Yucca glauca Nutt., *Fritillaria atropurpurea* Nutt., *Odostemon repens* (Lindl.), *Delphinium nelsonii* Greene, *D. geyeri* Greene, *Cheirinia aspera* (Nutt.), *Astragalus caespitosus* (Nutt.), *Viola nuttallii* Pursh, *Betula fontinalis* Sarg., *Cercocarpus montanus* Raf., *Phlox glabrata* (E. Nels.), *Lithophragma bulbifera* Rydb. (form with pink flowers), *Townsendia exscapa* (Richards.), *Pediocactus simpsoni* (Engelm.), and *Tetradymia inermis* Nutt.

On the *Tetradymia* (det. Payson) were white wooly galls, resembling those found on *Atriplex*. The species is evidently new.

The bees were collected by Mr. Corkins and Mrs. Cockerell, while I hunted snails and various insects. The series is a small one, but contains some novelties. There can be no doubt that more extensive collecting in this region would bring to light a number of undescribed forms. There has never been a resident collector of bees in Wyoming, though Dr. Lutz has visited the State and obtained many interesting species, including seven forms which I have already published as new, while a few others are in course of publication.

BOMBUS HUNTII Greene. One female.

ANTHOPHORA SIMILLIMA Cresson. One male, with pure black eyes.

TETRALONIA MEDICATA Cockerell. One female, at flowers of *Mertensia humilis*. This species got its name from the fact that it was discovered at Medicine Hat, Alberta. By a curious coincidence, it was next found, by Dr. Lutz, at Medicine Bow, Wyoming.

Andrena dolichotricha new species.

♂. Length about 9 mm., anterior wing 8.4 mm.; black, moderately robust, the head and thorax with very long erect hair, which is entirely pale, but delicately tinged with ochreous, this tint perhaps most pronounced on the mesopleura.

Head large, facial quadrangle broader than long; clypeus shining, but very densely and distinctly punctured, and with no smooth line; mandibles ordinary, short, reddish at end; process of labrum truncate; malar space linear; cheeks flattened, covered with very long hair, but not angulate; vertex broad and dull; antennae black, long and stout, moderately shining, the flagellum submoniliform; third and fourth joints equal (each

320 microns), the third with very short reddish hair on outer side.

Mesothorax and scutellum shining, with strong but not dense punctures; the punctures on mesothorax tend to run in longitudinal lines; area of metathorax well defined, truncate behind, and with about sixteen distinct but obtuse longitudinal ridges; under the microscope the surface of mesothorax is seen to be tessellate between the punctures, not polished; tegulae piceous.

Wings long, hyaline, with a faint brownish tint, more pronounced at apex; stigma large, bright ferruginous; nervures dusky reddish; basal nervure meeting nervulus; second cubital cell receiving recurrent nervure a little beyond middle.

Legs mainly black, with long hair like that of thorax, but all the tarsi reddish apically, hind tarsi entirely red, and their tibia red at apex, or the legs may be entirely black, except the last joint of tarsi; hair on inner side of hind tarsi creamy white.

Abdomen shining, the surface under a lens appearing finely roughened, but not distinctly punctate; the whole surface covered with rather long, thin, erect, white hair, only forming bands, and these not very distinct, at sides of third and fourth segments; second segment depressed one-half; apex without special features.

Chimney Rock, Wyoming, May 17, 2 males (W. P. Cockerell and C. L. Corkins).

This is a member of Viereck's subgenus *Scrapteropsis*, but not very similar to any known to me. In Bruner's table it runs straight to *A. sayi* Rob., and, although that is a very different species, with much larger head, longer mandibles and less hairy abdomen, there is apparently some relationship, as shown by a certain similarity in the area of the metathorax. Superficially, there is some resemblance to *A. tacitula* Ckll., but that is smaller, with distinctly punctured abdomen.

Andrena transnigra paysoni new subspecies.

♀. Wings dilute greyish (strongly reddish in *A. transnigra* Viereck); stigma slender, clear red with dark margin; face with abundant white hair; occiput with white hair; a band of light hair extending down front of mesopleura; hind femora with much long, pure white hair beneath.

Chimney Rock, Wyoming, May 17, 1 female, taken by C. L. Corkins on the ground in a dry place.

ANDRENA ERYTHROGASTRA (Ashmead). Three males, at willows.

PARANDRENA ANDRENOIDES (Cresson). Five males, 3 females, at willow.

PARANDRENA ANDRENOIDES BICOLOR Rob. Four females, at willow.

SPHECODES SOPHIAE Cockerell. One female, with head not so broad as in type. I have commented on the variability of *S. sophiae* in *Entomologist,* 1904. p. 232, and suspect that when the males are known the species as now understood may be divided into two or more.

NOMADA CIVILIS Cresson. One male.

NOMADA (s. str.), two species, males. These must await the time when the accumulated materials in this difficult group can be revised.

A new *Osmia* collected is described below by Miss Sandhouse. The types of the new forms are in my collection, but will later go to the U. S. National Museum.

Since we returned home, Professor Payson has sent species of *Andrena* and *Halictus* which he collected a few days later. The *Andrena* is a remarkable and very distinct species.

Andrena metea new species.

♂. Length about 10.5 mm.; intense black, with entirely black hair, long and erect on head and thorax; clypeus high, polished, weakly punctured, yellowish-white, with a pair of conspicuous black spots; facial quadrangle broader than long; labrum polished, elevated in middle (but without a distinct process), and beneath the elevation a large deep pit from which hairs project; malar space a well-developed shining band; third antennal joint about or almost as long as next two together.

Mesothorax and scutellum dull, with sparse weak punctures; area of metathorax triangular, dull, not plicate; anterior trochanters not modified; mesopleura dull; tegulae black.

Wings brownish hyaline; stigma rather slender, dark reddish; nervures fuscous; basal nervure meeting nervulus; second cubital cell broad, receiving recurrent nervure beyond middle.

Abdomen dullish, finely rugosopunctate, second segment depressed about a third. Under a lens, I thought I could see a spine on the hind trochanter, but it turned out to be a tuft of closely appressed (pencil-like) hairs.

Laramie, Wyoming, May 24, at flowers of *Astragalus caespitosus;* collected by E. B. Payson and E. C. Harrah. Nearest, apparently, to *Andrena maura* Vier., but easily known by the entirely black hair.

DESCRIPTION OF A NEW SPECIES OF OSMIA. BY GRACE A. SANDHOUSE.

Osmia corkinsi Sandhouse, new species.

♀. 9-10 mm. long; blue-green, the face, mesothorax and scutellum quite brassy green; scopa black.

Head normal; inner orbits converging slightly below; face closely punctured, the punctures deeper on the supraclypeal area; pubescence black, except the hair of the front, is largely, and that of the occiput entirely, pale fulvous; antennae black; clypeus very dark blue-green, the anterior margin truncate but slightly concave; mandibles black, tridentate.

Dorsum of thorax very closely and rather coarsely punctured, the pubescence fulvous; disk of propodeum dull and very dark blue-green; tufts of hair behind wings fulvous; hair of pleura and sides of propodeum black; tegulae black, the anterior portion greenish and punctate, with some pale hair on the margin.

Wings hyaline; anterior wing about 6.5 mm. long; basal nervure meeting nervulus; second cubital cell little longer than the first on marginal, receiving first recurrent nervure about one-fourth from the base and the second recurrent nervure one-fifth from the apex.

Legs black; pubescence black, except for some reddish hairs on the anterior and middle basitarsi; hind tibial spurs weakly curved; hind femora obscurely metallic.

Abdomen rather broad, shining; bases of segments with piliferous punctures; punctureless apical margins of segments narrow; hair of first dorsal segment white except for patches of black at the extreme sides, of second segment black with some white intermixed, especially on the median base, of segments 3-6 black.

Chimney Rock, Albany County, Wyoming, May 17, (C. L. Corkins). The plant from which this specimen was taken was not recorded, but some pollen from the scopa was examined by Miss Pope, and showed the bee had visited *Astragalus* and *Mertensia*, probably *M. humilis*.

Paratype—Boulder, Colorado, May 26, at *Aragallus lambertii* (M. D. Ellis). This differs from the type only in having the face and tegulae bluer."

"Very similar to *subtrevoris* Cockerell, by the brighter hair on the scutellum; more closely punctured abdominal segments, with narrower punctureless apical margins; mesothorax and scutellum brassy green; tegulae metallic in front; basal nervure meeting nervulus, behind the nervulus in *subtrevoris;* some pale hair on front, entirely black in *subtrevoris;* the tongue is much shorter than that of *subtrevoris*."